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CURRENT SERIAL RECORDS

# WATER SUPPLY OUTLOOK FOR ARIZONA

and  
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE,  
SALT RIVER VALLEY WATER USERS ASSOCIATION  
and  
ARIZONA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies  
named above in cooperation with the Federal, State and pri-  
vate organizations listed on the last page of this report.

AS OF  
**FEB. 15, 1970**

## TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made at later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

## PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bismarck, Montana 59715
Nevada	P. O. Box 4850, Reno, Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Building, Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 340, Casper, Wyoming 82601

## PUBLISHED BY OTHER AGENCIES.

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia.



# **WATER SUPPLY OUTLOOK FOR ARIZONA**

and  
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

*Issued by*

**KENNETH E. GRANT**  
ADMINISTRATOR  
SOIL CONSERVATION SERVICE  
WASHINGTON, D.C.

*Released by*

**M. D. BURDICK**  
STATE CONSERVATIONIST  
SOIL CONSERVATION SERVICE  
PHOENIX, ARIZONA

*In Cooperation with*

**RICHARD K. FREVERT**  
DIRECTOR  
ARIZONA AGRICULTURAL  
EXPERIMENT STATION

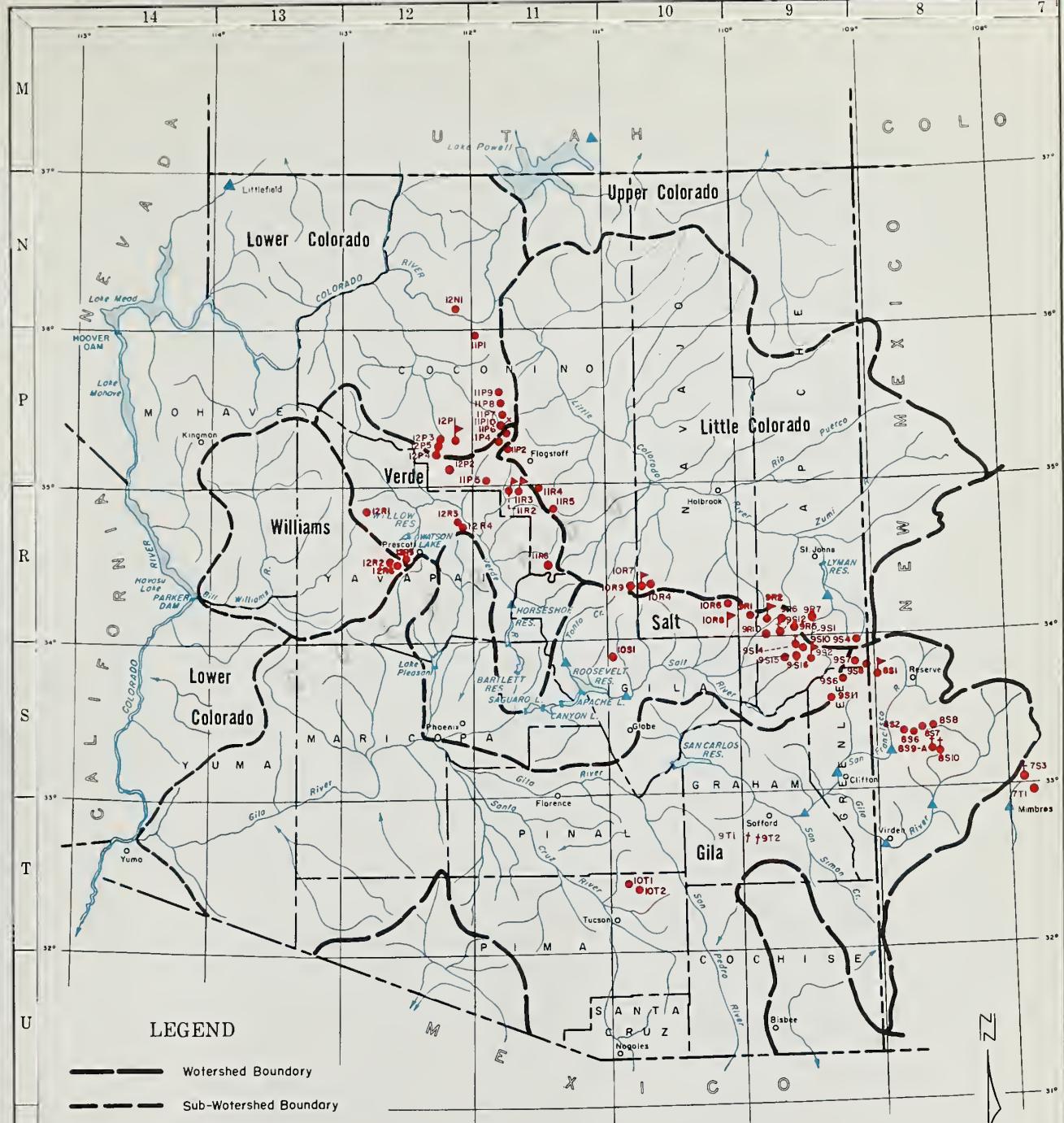
**VICTOR I. CORBELL**  
PRESIDENT  
SALT RIVER VALLEY WATER  
USERS ASSOCIATION

*Report prepared by*

**RICHARD W. ENZ, Snow Survey Supervisor**

SOIL CONSERVATION SERVICE  
ROOM 6029 FEDERAL BUILDING  
PHOENIX, ARIZONA 85025





## ARIZONA COOPERATIVE SNOW SURVEYS

Snow Courses and Sub-Watersheds

25 0 25 50 75  
SCALE IN MILES

INDEX to SNOW COURSES and SOIL MOISTURE STATIONS

Number	Name	Sec.	Twp.	Rge.	Elev.	River Basin
11P10-A	Agassiz	32	23N	7E	11200	Little Calarada
11R6	Baker Butte (p)	4	12N	9E	7300	Verde
9S1-A	Baldy (p)	28	7N	27E	9125	Little Calarada
9S15	Baldy #2	12	6N	26E	10000	Little Calarada
9S16	Baldy #3	13	6N	26E	11000	Little Calarada
10T1	Bear Wallow	6	12S	16E	8100	Gila
9S6	Beaver Head	13	4N	30E	8000	San Francisca
12P5	Bill Williams Intermediate	17	21N	2E	8550	Lawer Calarada
12P4	Bill Williams Summit	17	21N	2E	8950	Lawer Calarada
9S10-A	Black River Divide	10	6N	27E	9400	Salt
12N1	Bright Angel	34	33N	3E	8400	Lawer Calarada
12R1	Camp Woad	3	16N	6W	5700	Verde
10R7-M	Canyon Creek #2	18	11N	15E	7500	Little Calarada
10R9	Canyon Paint (p)	28	11N	14E	7600	Salt
11R2-M	Casner Park	19	18N	8E	6930	Verde
12P1-M	Chalender	27	22N	3E	7100	Verde
9R7	Cheese Springs	28	8N	27E	8600	Little Calarada
12R6	Copper Basin Divide (p)	23	13N	3W	6720	Verde
10R8-A	Carduray Creek	4	8N	21E	6000	Salt
9S7	Caranada Trail	26	5N	30E	8000	San Francisca
9T2-A	Crazy Horse	34	8S	24E	10200	Gila
7T1	Emary Pass #1	16	16S	9W**	7800	Mimbres
7T2	Emary Pass #2	16	16S	9W**	7800	Mimbres
10R6	Forest Dale	2	9N	21E	6430	Salt
9R5	Ft. Apache	18	7N	27E	9160	Little Calarada
11P2	Ft. Valley (p)	22	22N	6E	7350	Little Calarada
8S1-M	Frisca Divide	31	6S	20W**	8000	San Francisca
12R4	Gaddes Canyan	11	15N	2E	7600	Verde
11P1	Grand Canyan	21	30N	4E	7500	Lawer Colarada
9S11	Hannagan Meadows (p)	19	3N	29E	9090	Salt
11R5	Happy Jack	30	17N	9E	7630	Verde
9R10	Hawley Lake	13	7N	24E	8300	Salt
10R4	Heber (p)	28	11N	15E	7600	Little Colarada
9T1-A	High Peak	34	8S	24E	10500	Gila
8S9-A	Hummingbird	19	11S	17W**	10550	San Francisca
8S6	Ice King	6	11S	18W**	8020	San Francisca
11P9	Inner Basin #1 (p)	28	23N	7E	10000	Little Calarada
11P8	Inner Basin #2 (p)	28	23N	7E	9750	Little Calarada
11P7	Inner Basin #3	3	23N	7E	10250	Little Calarada
12R2	Iran Springs	22	14N	3W	6200	Bill Williams
9S2-A	Maverick Fark (p)	13	6N	27E	9150	Salt
7S3-A	McKnight Cabin	10	15S	10W**	9300	Mimbres
9R2-M	McNary	23	8N	23E	7200	Salt
9R1	Milk Ranch	33	8N	23E	7000	Salt
12R3	Mingus Mauntain	3	15N	2E	7100	Verde
8S2	Magallan	2	11S	19W**	7000	San Francisca
11R4	Marman Lake	13	18N	8E	7350	Little Calarada
11R3-M-A	Marman Mauntain (p)	14	18N	8E	7500	Verde
9S12-A	Mt. Ord	4	6N	26E	11000	Salt
11P5-M	Newman Park	25	19N	6E	6750	Verde
9S4	Nutriasa	23	6N	30E	8500	San Francisca
8S7	Redstane Trail	5	11S	18W**	8600	San Francisca
10T2	Rase Canyan	15	12S	16E	7300	Gila
8S8	Silver Creek Divide	4	11S	18W**	9000	San Francisca
9S14-A	Smith Cienega	10	6N	26E	9850	Salt
11P4	Snaw Bowl #1 (p)	36	23N	6E	10260	Verde
11P6	Snaw Bowl #2	31	23N	7E	11000	Verde
9S8	State Line	6	6S	21W**	8000	San Francisca
12P2	White Harse Lake Jct.	2	20N	2E	7150	Verde
12R5	White Spar	19	13N	2W	6000	Verde
8S10-A	Whitewater	19	11S	17W**	10750	Gila
12P3	Williams Ski Run	9	21N	2E	7720	Lawer Calarada
9R6	Wilson Lake (p)	4	7N	26E	9000	Salt
10S1	Warkman Creek	33	6N	14E	6900	Salt

M SOIL MOISTURE STA.  
(p) STORAGE GAGE

A AERIAL SNOW DEPTH MARKER

SOIL MOISTURE STA. ONLY  
NM PRINCIPAL MERIDIAN

## ARIZONA WATER SUPPLY OUTLOOK

FEBRUARY 15, 1970

Near normal water supplies are in prospect for the parts of Arizona served by storage facilities. With snow cover the lowest on record, streamflow is expected to be 1/3 of average. Direct diversion areas will be short.

### SNOW COVER

Continued warm weather and lack of storm activity have reduced snow cover to the lowest in 23 years of record. There is virtually no snow on Arizona watersheds. Only above 9,000' on the San Francisco Peaks and the White and Mogollon Mountains is there significant snow. At 11,000' there is 2 to 3' of snow containing 7 to 11" of water.

## PRECIPITATION

February precipitation is following the January trend of about 1/4 of normal. Only scattered showers have occurred since January 1. Precipitation from the last moist air passing through the state amounted to only 1/3 of an inch or less at most stations.

### SOIL MOISTURE

Soil moisture is generally above normal for this date due to fall storms and early melting snow. Surface drying is occurring at the lower levels.

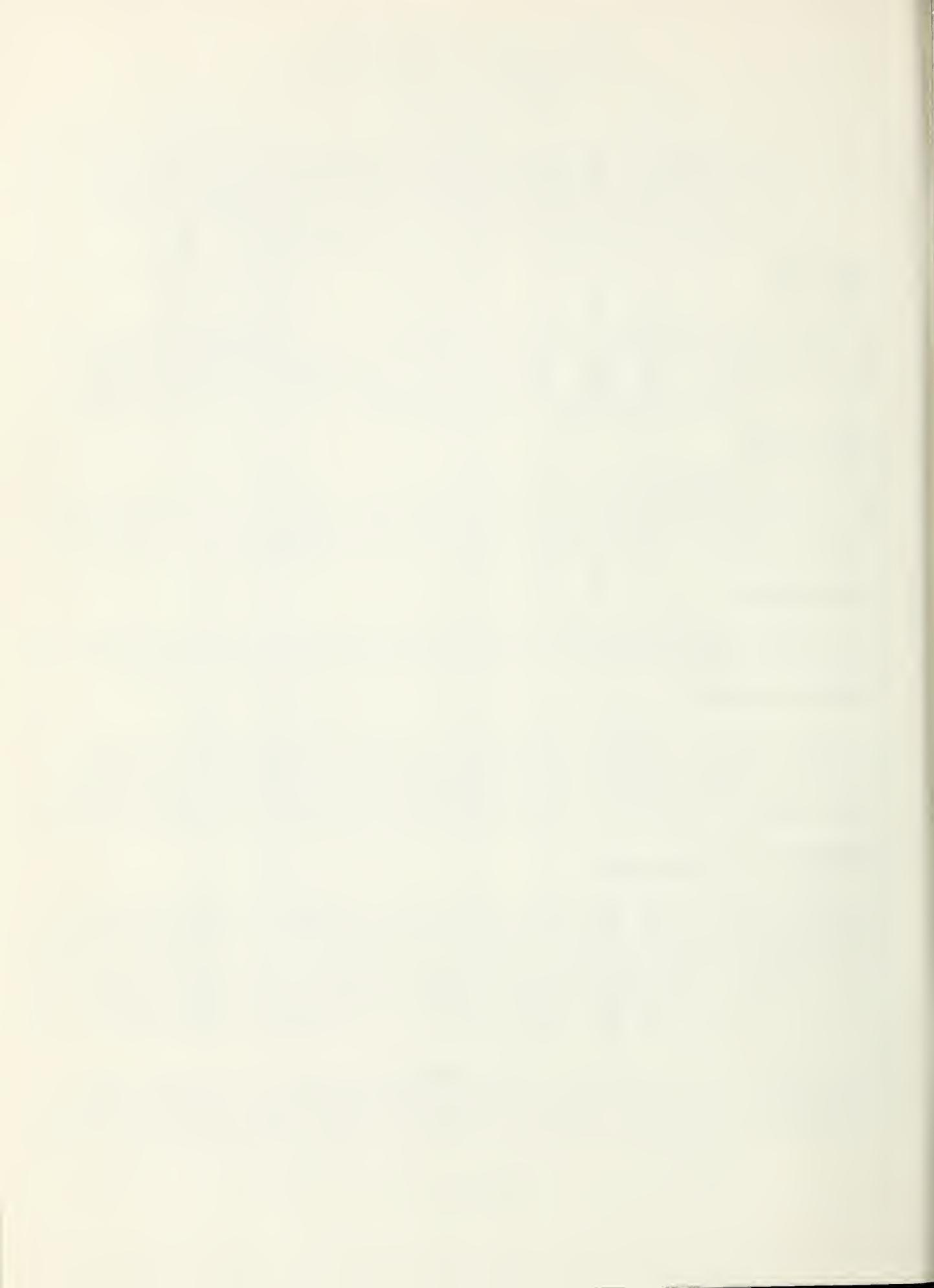
RESERVOIR STORAGE

All major reservoirs contain significantly above average amounts of water. Salt River Project reservoirs, presently containing 66% of capacity, are 30% above average. Lake Pleasant and San Carlos Reservoirs are 70 and 80% above average respectively. The Colorado River reservoirs contain 50% above average amounts of water, although only 53% of capacity.

## STREAMFLOW AND WATER SUPPLY

Streamflow forecasts have all been reduced due to lack of snow and absence of precipitation. Salt River Project streams are forecast to produce 142,000 acre-feet during the February-May period. This is 25% of last year and 35% of the 1953-67 15-year average. The Little Colorado and Gila Rivers are predicted to flow 19 and 29% of average. Only the mainstem of the Colorado River is expected to produce normal runoff this year. It is forecast to flow 7,018,000 acre-feet, 8% above average.

Water supplies will be short in areas depending on direct diversion from streams, such as the Upper Gila. Considerable supplemental pumping will be required there and on the San Carlos Project. Due to high reservoir storage, all other major irrigation projects will have adequate water this year.



**STREAMFLOW FORECASTS** ABOUT FEBRUARY  
 15, 1970

BASIN STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST Thousand Acre Feet	Percent of Average	FORECAST PERIOD	THOUSAND ACRE FEET Last Year	Average +
<b>SALT RIVER DRAINAGE</b>					
Salt nr. Roosevelt	80	33	Feb-May	313.7	239.4
Tonto Creek nr. Roosevelt	5	17	Feb-May	39.2	29.3
Verde River above Horseshoe	57	41	Feb-May	209.6	139.7
<b>GILA RIVER DRAINAGE</b>					
Gila River nr. Gila	17	44	Feb-May	22.6	38.3
Gila River nr. Solomon	32	34	Feb-May	45.4	95.4
Gila River nr. Virden	17.5	37	Feb-May	25.9	47.8
Frisco River at Clifton	17	35	Feb-May	25.7	48.7
Frisco River at Glenwood	6	31	Feb-May	8.5	19.5
Gila River nr. Solomon	9	23	March	10.9	38.4
<b>MIMBRES RIVER DRAINAGE</b>					
Mimbres River nr. Mimbres	0.8	29	Feb-May	.7	2.8
<b>COLORADO RIVER DRAINAGE</b>					
Little Colo. River above Lyman Dam	1.6	19	Feb-June	8.2	8.5
Colo. River -- Lake Powell Inflow *	7018	108	Apr-July	8162.0	6527.0
<b>VIRGIN RIVER DRAINAGE</b>					
Virgin River nr. Littlefield	16	48	Apr-June	182.9	33.4
<b>GRANITE CREEK DRAINAGE</b>					
Granite Creek	0.7	---	-----	-----	---
Willow Creek	0.4	---	-----	-----	---
The Gila River is predicted to drop below 100 cfs on March 25.					
* Forecast issued by Soil Conservation Service, Salt Lake City, Utah. + Average is for 15-year period, 1953-67					
- 2 -					

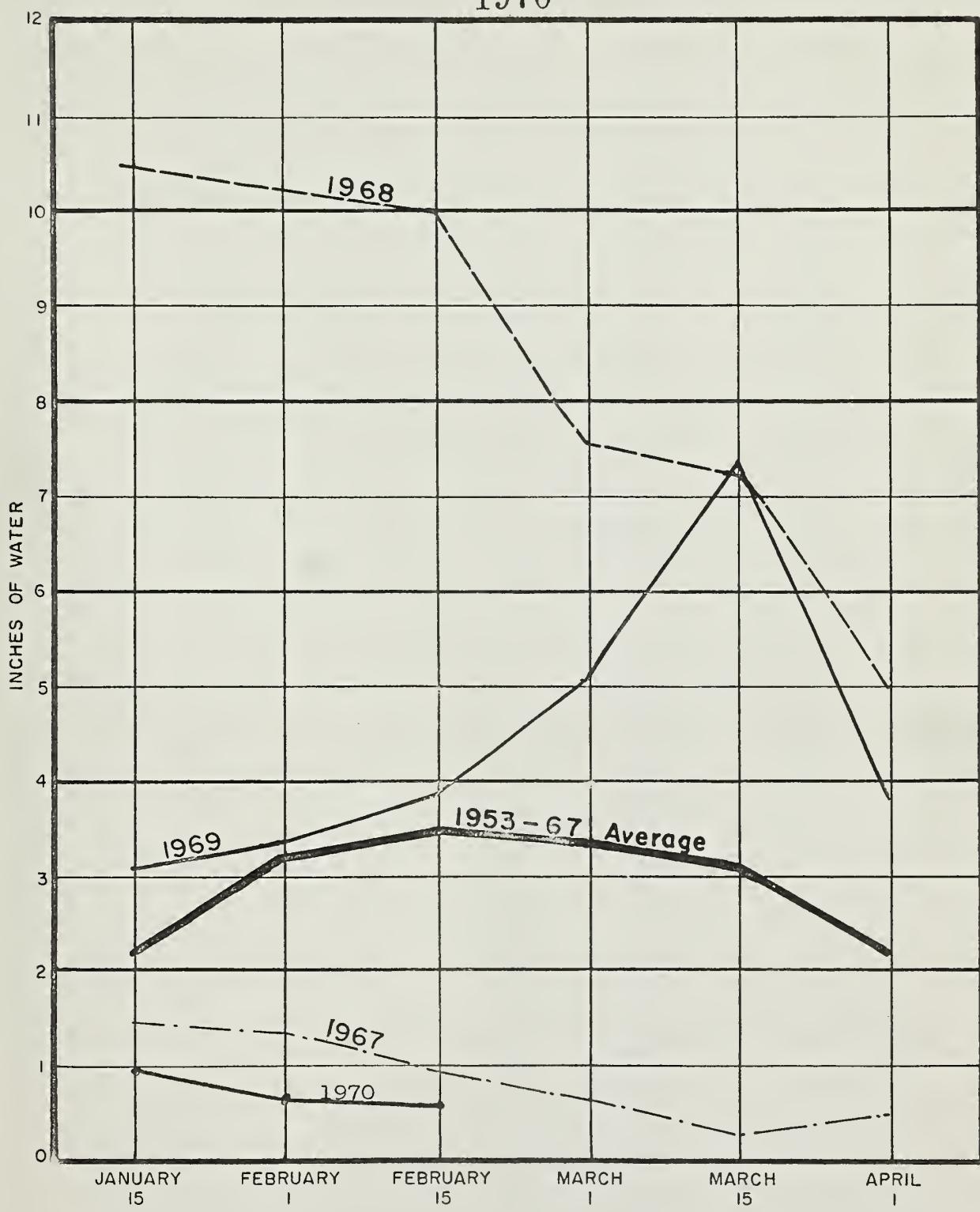


## RESERVOIR STORAGE (Thousand Acre Feet) MID-MONTH READING ABOUT FEBRUARY 15, 1970

Basin or Stream	RESERVOIR	Usable Capacity	Usable Storage		
			This Year	Last Year	Average+
<u>GILA RIVER DRAINAGE</u>					
Agua Fria	Lake Pleasant	157.6	71.2	110.0	41.9
Granite	Watson Lake	4.7	1.5	3.1	---
Granite	Willow Creek	6.1	2.3	2.2	---
Gila	San Carlos	984.9	189.3	480.6	106.8
Verde (2)	Bartlett & Horseshoe	317.7	97.3	217.5	109.4
Salt (4)	Roosevelt, Apache, Canyon & Saguaro	1755.0	1276.5	1510.1	948.0
<u>COLORADO RIVER DRAINAGE</u>					
Colorado	Lake Havasu	619.4	544.7	545.0	536.5
Colorado	Lake Mohave	1810.0	1707.0	1643.0	1690.0
Colorado	Lake Mead	26159.0	16987.0	15473.0	16505.2
Colorado	Lake Powell	25002.0	9366.0	9236.0	---
Little Colorado	Lyman	30.6	19.4	19.1	9.2
Little Colorado	Show Low Lake	5.1	0.4	0.7	1.7*
* Average is for less than 15 years of record in the 1953-67 period.					
- 3 -					



RELATIVE SNOW WATER ACCUMULATION  
ARIZONA  
1970



This graph represents the average snow water content on eleven selected snow courses on Arizona Sub-Watersheds.

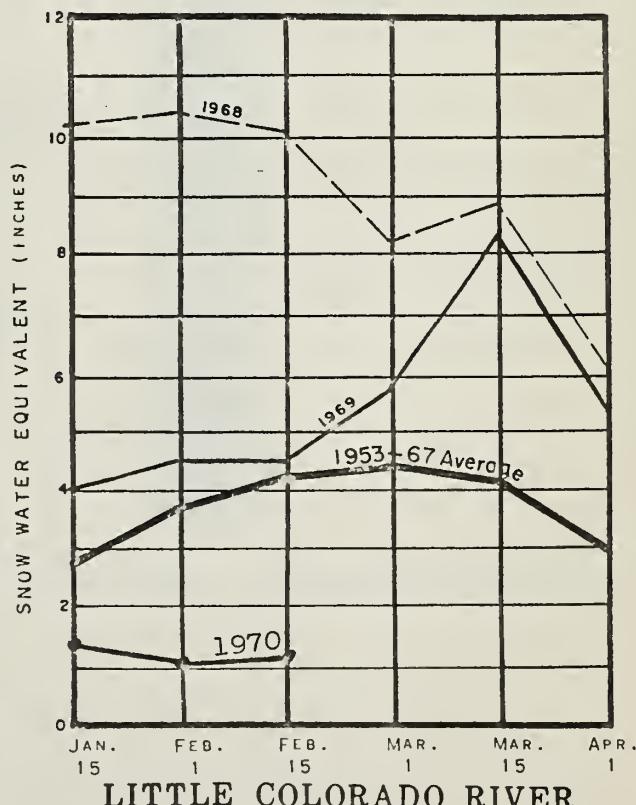
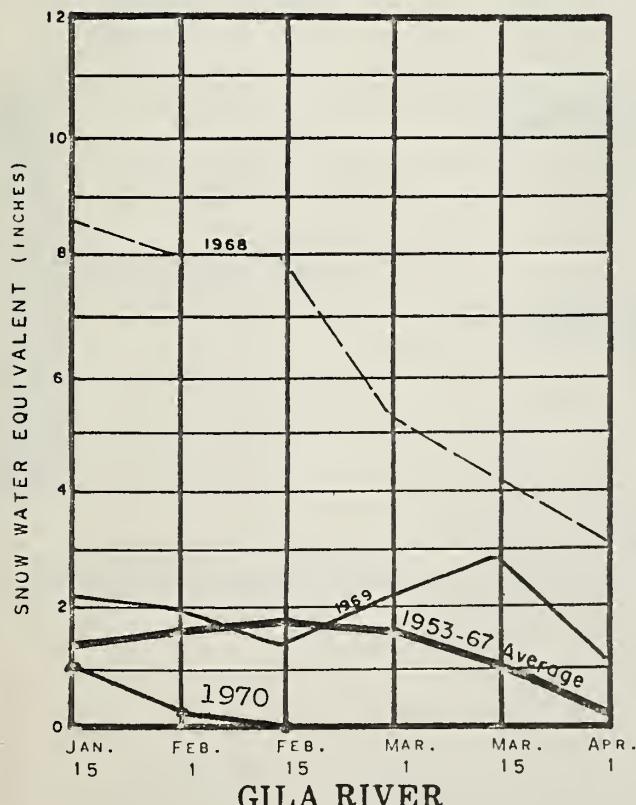
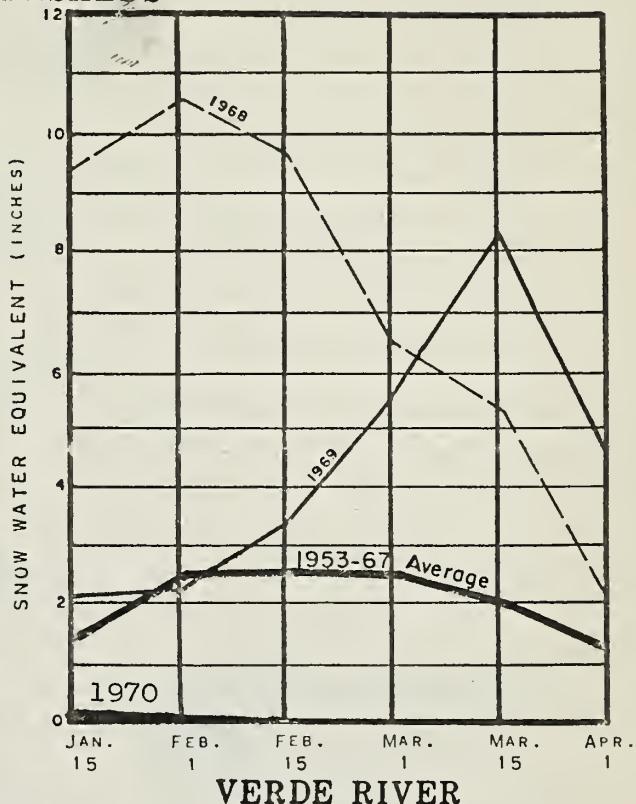
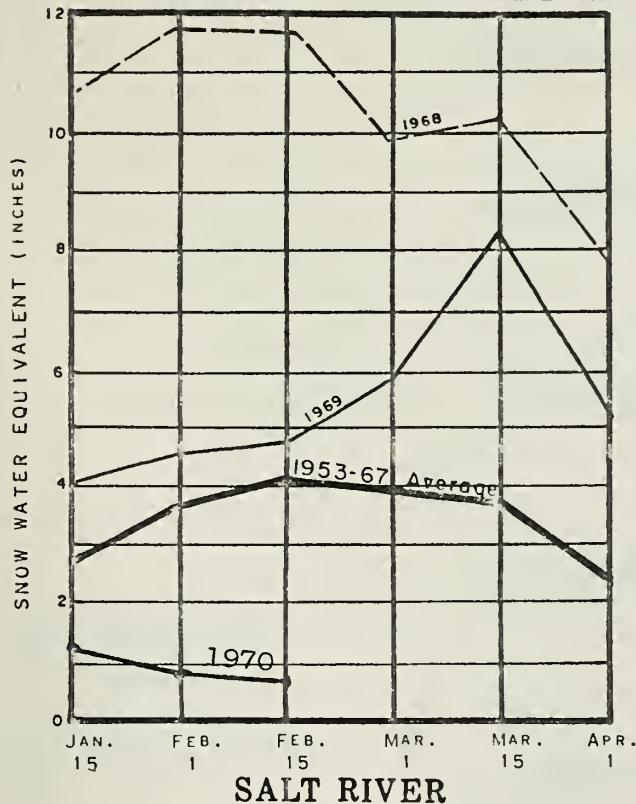


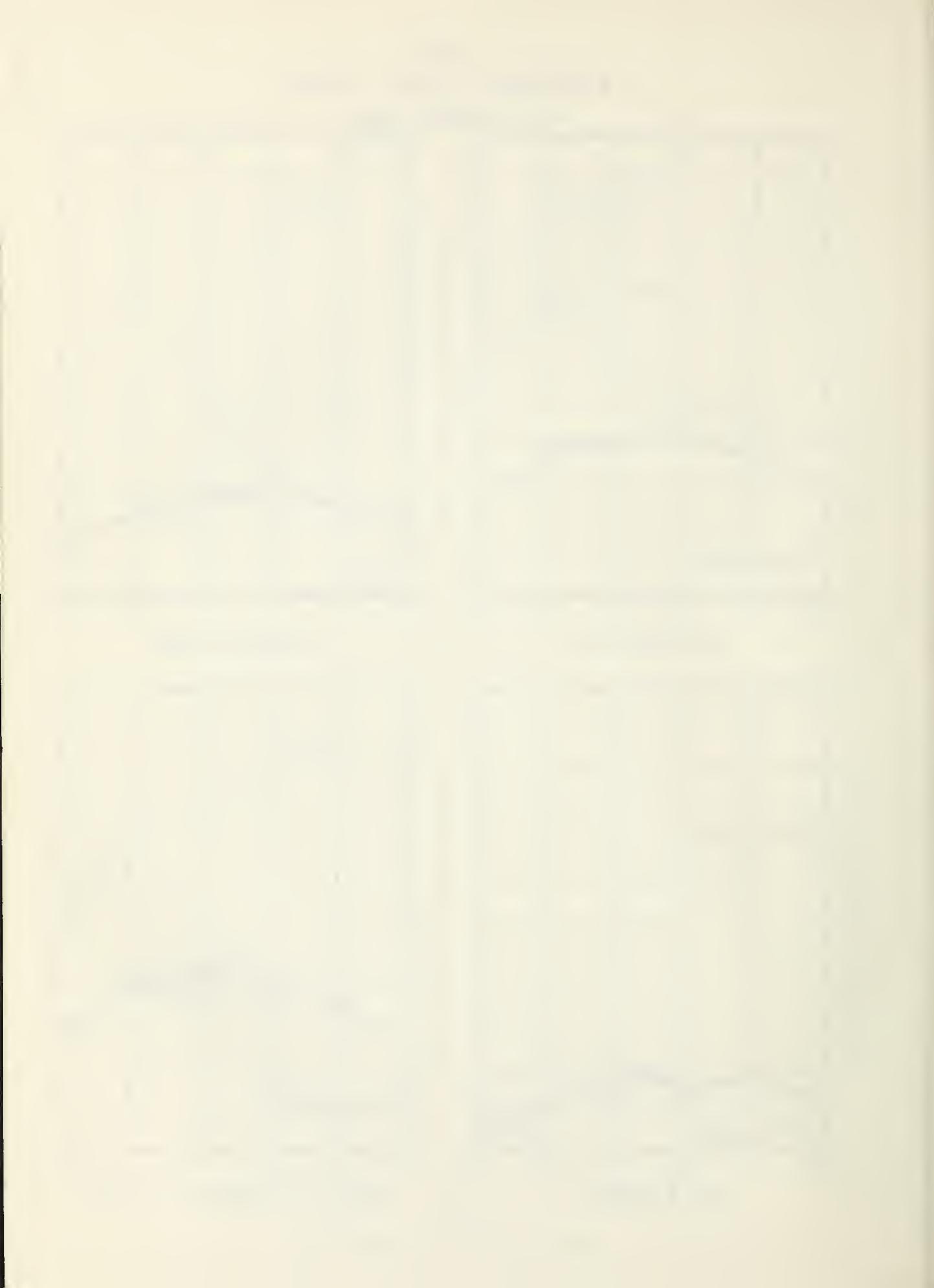
## SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS) FEBRUARY 15, 1970

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF:	
		Last Year	Average
Gila	6	0	0
Salt	9	17	15
Verde	7	0	0
Little Colorado	4	32	30



1970  
ARIZONA SNOW COVER  
BY WATERSHEDS





WATER SUPPLY INVENTORY

SALT RIVER VALLEY SYSTEM

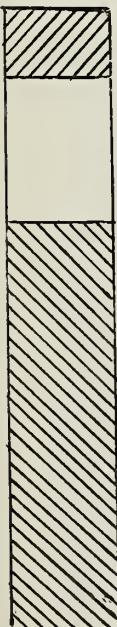
FEBRUARY 15, 1970

3,000,000

2,500,000

2,000,000

AVERAGE SUPPLY ON  
FEBRUARY 15



F E T  
F E  
A C R E  
A C

1,500,000

1,000,000

ANTICIPATED 1970 SUPPLY \*



500,000

0

\* Based on Present Storage + Forecast Spring Runoff + Average Summer Runoff



## SNOW ABOUT FEBRUARY 15, 1970

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
NAME	Elevation	Date of Survey	Snow Depth (inches)	Water Content (inches)	Water Content (inches)	Average +
<u>GILA RIVER</u>						
Bear Wallow	8100	2/13	0	0.0	0.5	4.3
Beaver Head	8000	2/14	0	0.0	2.8	2.7
Coronado Trail	8000	2/13	0	0.0	3.5	2.3
Crazy Horse (A)	10200	REPORT	DELAYED		---	---
Emory Pass #1 *	7800	2/13	0	0.0	T	---
Emory Pass #2 *	7800	2/13	0	0.0	0.3	---
Frisco Divide	8000	2/13	0	0.0	1.1	2.1
Hannagan Meadows *	9090	2/14	14	3.9	11.5	---
High Peak (A)	10500	REPORT	DELAYED		---	---
Hummingbird (A)	10550	2/13	26	8.6	14.1	---
Ice King	8020	2/13	11	4.0	6.1	5.5**
McKnight Cabin *	9300	2/13	0	0.0	2.0	---
Mogollon	7000	2/13	0	0.0	T	1.9
Nutrioso	8500	2/13	0	0.0	1.2	1.6
Redstone Trail	8600	2/13	13	4.4	7.6	7.0**
Rose Canyon	7300	2/13	0	0.0	0.0	2.8
Silver Creek Divide	9000	2/13	22	6.8	10.6	10.8**
State Line	8000	2/13	0	0.0	1.9	2.2
Whitewater (A)	10750	2/13	39	10.9	14.7	---
<u>SALT RIVER</u>						
Baldy *	9125	2/13	5	1.7	8.1	6.1
Beaver Head	8000	2/14	0	0.0	2.8	2.7
Canyon Creek	7500	2/13	0	0.0	2.0	2.9**
Canyon Point	7600	2/13	0	0.0	2.5	---
Coronado Trail	8000	2/13	0	0.0	3.5	2.3
Forest Dale	6430	2/13	0	0.0	0.0	1.2
Ft. Apache	9160	2/13	11	3.6	7.5	6.5
Hannagan Meadows	9090	2/14	14	3.9	11.5	---
Hawley Lake	8300	2/13	2	0.6	8.4	---
Heber	7600	2/13	0	0.0	2.7	3.0
Maverick Fork	9050	2/13	2	0.8	12.1	7.4
McNary	7200	2/13	0	0.0	0.8	2.5
Milk Ranch	7000	2/13	0	0.0	0.0	1.7
Mt. Ord (A)	11000	N O	S U R V E Y		---	---
Nutrioso *	8500	2/13	0	0.0	1.2	1.6
Smith Cienega (A)	9850	N O	S U R V E Y		---	---
Wilson Lake	9000	2/13	18	5.3	11.4	---
Workman Creek	6900	2/10	2	0.2	5.8	4.5
<u>BILL WILLIAMS RIVER</u>						
Camp Wood *	5700	2/13	0	0.0	0.2	0.5
Copper Basin Divide	6720	2/13	0	0.0	1.0	2.1**
Iron Springs	6200	2/13	0	0.0	0.2	0.6
+ 1953-67, 15-year period. (*) Adjacent drainage Adjusted Average. (A) Aerial observations						
(**) 1953-67 Water content estimated.						



## SNOW ABOUT FEBRUARY 15, 1970

DRAINAGE BASIN and/or SNOW COURSE		Date of Survey	THIS YEAR		PAST RECORD	
			Snow Depth (Inches)	Water Content (Inches)	Last Year	Average +
<u>VERDE RIVER</u>						
Baker Butte	7300	2/13	0	0.0	5.9	---
Camp Wood	5700	2/13	0	0.0	0.2	0.5
Chalender	7100	2/13	0	0.0	2.4	2.5
Copper Basin Divide	6720	2/13	0	0.0	1.0	2.1**
Fort Valley	7350	2/13	0	0.0	4.0	1.8
Gaddes Canyon	7600	2/13	0	0.0	4.8	3.8**
Happy Jack	7630	2/13	0	0.0	3.0	2.7
Iron Springs *	6200	2/13	0	0.0	0.2	0.6
Mingus Mountain	7100	2/13	0	0.0	1.4	0.9
Mormon Lake *	7350	2/13	0	0.0	3.0	3.1
Mormon Mountain	7500	2/13	0	0.0	6.3	3.9
Newman Park	6750	2/13	0	0.0	2.0	1.6**
Snow Bowl #1	10260	2/15	19	5.5	14.7	8.0**
Snow Bowl #2	11000	2/15	29	7.1	20.6	---
White Horse Lake Jct.	7150	2/13	0	0.0	3.0	---
White Spar	6000	2/13	0	0.0	0.3	1.0**
<u>LOWER COLORADO RIVER</u>						
Bill Williams Int.	8550	2/13	3	0.8	10.3	---
Bill Williams Summit	8950	2/13	12	2.5	14.6	---
Bright Angel	8400	N O	S U R	V E Y	---	---
Chalender *	7100	2/13	0	0.0	2.4	2.5
Fort Valley	7350	2/13	0	0.0	4.0	1.8
Grand Canyon	7500	2/13	0	0.0	2.0	1.7
Williams Ski Run	7720	2/13	3	0.8	7.3	---
<u>LITTLE COLORADO RIVER</u>						
Agassiz	11200	N O	S U R	V E Y	---	---
Baldy	9125	2/13	5	1.7	8.1	6.1
Canyon Creek	7500	2/13	0	0.0	2.0	2.9**
Canyon Point	7600	2/13	0	0.0	2.5	---
Cheese Springs	8600	2/13	11	3.2	7.0	---
Forest Dale	6430	2/13	0	0.0	0.0	1.2
Ft. Apache	9160	2/13	11	3.6	7.5	6.5
Fort Valley	7350	2/13	0	0.0	4.0	1.8
Happy Jack *	7630	2/13	0	0.0	3.0	2.7
Heber	7600	2/13	0	0.0	2.7	3.0
Inner Basin #1	10100	N O	S U R	V E Y	---	---
Inner Basin #2	9750	N O	S U R	V E Y	---	---
Inner Basin #3	10250	N O	S U R	V E Y	---	---
McNary	7200	2/13	0	0.0	0.8	2.5
Mormon Lake	7350	2/13	0	0.0	3.0	3.1
Mormon Mountain	7500	2/13	0	0.0	6.3	3.9
Nutrioso	8500	2/13	0	0.0	1.2	1.6
Snow Bowl #1	10260	2/15	19	5.5	14.7	8.0**
Snow Bowl #2	11000	2/15	29	7.1	20.6	---
Wilson Lake *	9000	2/13	18	5.3	11.4	---
+ 1953-67, 15-year period. (*) Adjacent drainage. (**) 1953-67 Adjusted Average. (A) Aerial observation: Water content estimated						



PRECIPITATION AT SELECTED ARIZONA STATIONS 1/

STATION	Precipitation (Inches)			
	January - 1970		Current Water Year (Oct. 1969 - January 1970)	
	Total	Departure from Normal	Total	Departure from Normal
Alpine	0	- 1.60	4.14	- 1.26
Ash Fork	.32	- .70	2.97	- .65
Clifton	0	- .91	4.11	+ .74
Douglas Smelter	.09	- .63	.97	- 1.52
Flagstaff WBO *	.51	- 1.32	4.15	- 1.85
McNary	.31	- 2.15	5.01	- 3.09
Payson Ranger Station	.74	- 1.38	5.19	- 1.68
Phoenix WBO *	T	- .73	1.41	- 1.12
Prescott (City)	.28	- 1.70	3.33	- 2.72
Springerville	.16	- .55	1.49	- .95
Tucson WBO *	T	- .82	1.91	- 1.09
Winslow WBO *	.27	- .16	1.43	- .54
Yuma WBO *	T	- .39	2.34	+ 1.13

1/ Data and Analysis furnished by Paul C. Kangieser,  
Arizona State Climatologist, U. S. Weather Bureau,  
ESSA, Tempe

\* WBO = Weather Bureau Office



## PRECIPITATION (Inches) ABOUT FEBRUARY 15, 1970

DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION			FROM APPROX. NOV. 1 TO DATE		
		Date of Reading	Month's Precipitation	Average +	This Year	Average +	Percent of Average
<u>GILA RIVER</u>							
Silver Creek Divide	9000	2/13	.45	---	6.95	---	---
Hannagan Meadows	9030	2/14	.30	1.10*	5.12	9.00*	57
<u>SALT RIVER</u>							
Canyon Point	7600	2/13	.32	---	6.68	---	---
Hannagan Meadows	9030	2/14	.30	1.10*	5.12	9.00*	57
Little Wildcat (Heber Snow Course)	7600	2/13	.38	1.15*	6.09	10.22*	60
Maverick Fork	9050	2/13	.40	1.12*	4.60	8.81*	52
Workman Creek **	6970	2/10	.00	1.42	7.88	12.46	63
Wilson Lake	9100	2/13	.53	---	4.66	---	---
<u>VERDE RIVER</u>							
Baker Butte	7300	2/13	.34	---	6.02	---	---
Copper Basin Divide	6720	2/13	.30	---	3.71	---	---
Fort Valley **	7350	2/13	.18	.83	3.04	6.43	47
Happy Jack **	7480	2/13	.16	1.07*	3.97	7.79*	51
Mingus Mountain	7660	2/13	.32	1.01	3.67	6.73	55
Mormon Mountain	7500	2/13	.13	---	4.69	---	---
<u>LITTLE COLORADO</u>							
Inner Basin #1	9830	---	---	---	---	---	---
Inner Basin #2	10050	---	---	---	---	---	---
Sheep Crossing (Baldy Snow Course)	9125	2/13	.57	1.00*	3.97	8.43*	47
Little Wildcat (Heber Snow Course)	7600	2/13	.38	1.15*	6.09	10.22*	60
* 1953-67 Adjusted Average							
** Data Supplied by U.S. Forest Service.							
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## SOIL MOISTURE ABOUT FEBRUARY 15, 1970

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average +
<u>GILA RIVER</u>							
Frisco Divide	8000	48	13.3	2/13	9.8	9.4	10.8
<u>SALT RIVER</u>							
Black River Divide	9100	48	16.8	2/13	17.8	14.6	15.4
Canyon Creek	7500	48	18.3	2/13	17.1	18.0	15.2
Corduroy Creek	6000	48	16.0	2/13	9.3	14.1	8.3
McNary	7200	48	16.3	2/13	13.8	17.9	14.3
<u>VERDE RIVER</u>							
Mormon Mountain	7500	48	16.1	2/13	16.5	17.7	15.4
Newman Park	6750	48	17.7	2/13	12.4	18.2	15.3



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**SNOW COURSE**

Baker Butte  
Baldy  
Bear Wallow  
Beaver Head  
Bill Williams Intermediate  
Bill Williams Summit  
Bright Angel  
Camp Wood  
Canyon Creek  
Canyon Point  
Chalender  
Cheese Springs  
Copper Basin Divide  
Coronado Trail  
Crazy Horse  
Emory Pass  
Forest Dale  
Ft. Apache  
Fort Valley  
Frisco Divide  
Gaddes Canyon  
Grand Canyon  
Hannagan Meadows  
Happy Jack  
Hawley Lake  
Heber  
High Peak  
Hummingbird  
Ice King  
Inner Basin #1, #2, #3  
Iron Springs  
Maverick Fork  
McKnight Cabin  
McNary  
Milk Ranch  
Mingus Mountain  
Mogollon  
Mormon Lake  
Mormon Mountain  
Mt. Ord  
Munds Park  
Newman Park  
Nutrioso  
Redstone Trail  
Rose Canyon  
Silver Creek Divide  
Smith Cienega  
Snow Bowl #1 and #2  
State Line  
White Horse Lake Junction  
White Spar  
Whitewater  
Williams Ski Run  
Wilson Lake  
Workman Creek

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**SNOW SURVEYOR**

SCS - Dick Enz  
SCS - Bill Cole  
Forest Service - Carl Sollers  
N. A. Josh  
Forest Service - John Sotelo  
Forest Service - John Sotelo  
National Park Service - Kenneth Hulick, Dist. Rgr.  
Forest Service - Walter G. Richardson  
SCS - Dick Enz  
SCS - Dick Enz  
Forest Service - M. Freshour  
SCS - Bill Cole  
SCS - Bill Gray  
Forest Service - John W. Holt  
Forest Service - Loyd Barnett  
SCS - Jim Powell and Travis Stevenson  
Bureau of Indian Affairs - Raymond Endfield  
SCS - Bill Cole  
Rocky Mountain Forest & Range Exp. Station  
Forest Service - J. M. Sanchez  
Paul G. Lidbeck  
National Park Service - Robert E. Scott, Dist. Rgr.  
N. A. Josh  
Forest Service - Don W. Witt  
Bureau of Indian Affairs - Raymond Endfield  
SCS - Dick Enz  
Forest Service - Loyd Barnett  
Ray Freeman  
James R. Wray  
SCS and USBR - Jack Jorgensen and Sid Saunders  
SCS - Bill Gray  
SCS - Bill Cole  
Ray Freeman  
Bureau of Indian Affairs - Raymond Endfield  
Bureau of Indian Affairs - Raymond Endfield  
Paul G. Lidbeck  
James R. Wray  
SCS - Jack Jorgensen  
SCS - Jack Jorgensen  
Salt River Project - Bill Warskow  
SCS - Jack Jorgensen  
SCS - Jack Jorgensen  
Forest Service - John W. Holt  
James R. Wray  
Forest Service - Carl Sollers  
James R. Wray  
Salt River Project - Bill Warskow  
Forest Service - Ky Porter  
Forest Service - J. M. Sanchez  
Forest Service - John Sotelo  
SCS - Bill Gray  
Ray Freeman  
Forest Service - John Sotelo  
SCS - Bill Cole  
Rocky Mountain Forest & Range Exp. Station



## The Following Organizations Cooperate in the Arizona Snow Survey Work

### FEDERAL

Department of Agriculture

Soil Conservation Service

Forest Service

Apache Forest

Coconino Forest

Coronado Forest

Gila Forest

Kaibab Forest

Prescott Forest

Rocky Mountain Forest and Range Experiment Station

Tonto Forest

Department of Commerce

Weather Bureau

Arizona Section

Department of Interior

Bureau of Reclamation

Region III

Geological Survey

Arizona District

Bureau of Indian Affairs

Fort Apache Reservation

San Carlos Irrigation Project

National Park Service

Grand Canyon National Park

Gila Water Commissioner

Safford, Arizona

### STATE

University of Arizona

Arizona Agricultural Experiment Station

Water Resource Research Center

### IRRIGATION PROJECTS

Salt River Valley Water Users' Association  
Phoenix, Arizona

San Carlos Irrigation and Drainage District  
Coolidge, Arizona

### PRIVATE

Southwest Forest Industries, Inc.  
McNary, Arizona

Other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

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*"The Conservation of Water begins  
with the Snow Survey"*